(i) Printed Pages : 2 Roll No. .....

(ii) Questions : 9 Sub. Code : 2 5 9 3 7

Exam. Code : 0 4 3 5

M.Sc. Bio-Technology 1st Semester

(2124)

BIOMOLECULES

Paper : MBIO-102

Time Allowed : Three Hours] [Maximum Marks : 80

Note :— Attempt **five** questions in all. Q. No. 1 is compulsory. Select **one** question from each unit.

1. (a) What is the role of Cori's cycle. 3
   (b) What is glycogenesis ? 2
   (c) What are chaperonins ? 2
   (d) What is the role of acyl carrier protein ? 2
   (e) What are waxes made up of ? 2
   (f) What is a nucleoside ? 2
   (g) What is stereoisomerism in carbohydrates ? 3

UNIT—I

2. (a) Discuss the structure of glycogen. 7
   (b) Discuss the experimental details in derivation of a metabolic pathway. 9
3. (a) Discuss the reactions in glycolysis. 8
   (b) Describe the reversible regulation of glycogen synthesis and breakdown. 8

UNIT—II

4. (a) Discuss how proteins are classified according to their biological function. 8

   (b) Discuss the structural features of alpha keratin. 8

5. (a) Discuss the forces stabilizing quaternary protein structure. 8

   (b) Discuss the structure function relationship of hemoglobin. 8

UNIT—III

6. (a) Discuss pathway for synthesis of saturated fatty acids. 10

   (b) Discuss the structure and function of phophatidyl choline. 6

7. (a) Discuss the catabolism of ketone bodies. 7

   (b) Discuss the biological functions of steroids. 9

UNIT—IV

8. (a) Discuss the Watson and Crick model of DNA structure. 9

   (b) Discuss the Tm and its relation to GC content. 7

9. (a) Discuss experimental evidence for DNA as the genetic material. 7

   (b) Discuss *de novo* pathway for synthesis of GMP. 9